

ABSTRACT

This invention relates to a process of forming a transistor with three vertical gate electrodes and the resulting transistor. By forming such a transistor it is possible to maintain an acceptable aspect ratio as MOSFET structures are scaled down to sub-micron sizes. The transistor gate electrodes can be formed of different materials so that the workfunctions of the three electrodes can be tailored. The three electrodes are positioned over a single channel and operate as a single gate having outer and inner gate regions.